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	DB=EPAB,JPAB; PLUR=YES; OP=OR		
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☐	L25	sodium	58788
☐	L24	l22 and l20	206
☐	L23	l19 and L22	51
☐	L22	phosphate	28191
☐	L21	l19 and L20	0
☐	L20	plasma or immunoglobulin	82882
☐	L19	sodium adj1 hexametaphosphate	147
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☐	L18	l16 and L17	6
☐	L17	sodium adj1 hexametaphosphate	1583
☐	L16	plasma or immunoglobulin	5281
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☐	L15	l13 and L14	21
☐	L14	(plasma or immunoglobulin).clm.	31852
☐	L13	l11 and L12	161
☐	L12	sodium adj1 hexametaphosphate	1437
☐	L11	plasma or immunoglobulin	156042
	DB=PGPB,USOC,EPAB,JPAB; PLUR=YES; OP=OR		
☐	L10	l8 and L9	167
☐	L9	plasma or immunoglobulin	244205
☐	L8	sodium adj1 hexametaphosphate	3167
	DB=USPT; PLUR=YES; OP=OR		
☐	L7	l1 and L6	10
☐	L6	(plasma or immunoglobulin).clm.	40251
☐	L5	l1 and L4	162
☐	L4	plasma	192421
☐	L3	l1 and L2	180
☐	L2	plasma or immunoglobulin	207555
☐	L1	sodium adj1 hexametaphosphate	3960

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=> s plasma or immunoglobulin or immunoglobulins
L1 17513 PLASMA OR IMMUNOGLOBULIN OR IMMUNOGLOBULINS

=> s sodium adj1 hexametaphosphate
L2 0 SODIUM ADJ1 HEXAMETAPHOSPHATE

=> s phosphate or hexametaphosphate
L3 14894 PHOSPHATE OR HEXAMETAPHOSPHATE

=> s l1 and l3
L4 305 L1 AND L3

=> s sodium
L5 40367 SODIUM

=> s l4 and l5
L6 40 L4 AND L5

=> d 1-40 all

L6 ANSWER 1 OF 40 FSTA COPYRIGHT 2007 IFIS on STN
AN 2007:R0196 FSTA
TI Alkaline pilot processing for recovery of fish muscle protein and properties of recovered protein.
AU Young-Boo Jang; Gun-Bae Kim; Keun Woo Lee; Yeung Joon Choi
CS Correspondence address, Yeung Joon Choi, Div. of Marine Life Sci., Inst. of Marine Ind., Gyeongsang Nat. Univ., Tongyeong 650-160, Korea. Tel. 82-55-640-3115. Fax 82-55-640-3111. E-mail yjchoi(a)nongae.gsnu.ac.kr
SO Journal of the Korean Society of Food Science and Nutrition, (2006), 35 (8) 1045-1050, 19 ref.
ISSN: 1226-3311
DT Journal
LA Korean
SL English
AB Alkaline processing for the recovery of fish proteins was investigated as an alternative to conventional and acidic processing. Properties of the recovered fish proteins were also examined. 6 species of fish were used: croceine croaker (Pseudosciaena crocea); blackspotted croaker (Protonibea diacanthus); croaker (Pennahia argentata); belanger's croaker (Johnius grypotus); spotted chub mackerel (Scomber australasicus) and Jack mackerel (Trachurus japonicus). Optimum operating conditions for the pilot-scale alkaline processing of fish were determined by measuring protein solubility, yield, texture and water-holding capacity. Recovered protein yield was 33.2% for whole fish and 61.8% for minced fish. Optimum homogenization speed and time, using an industrial scale homogenizer, were 3000 rpm and 5 min, respectively. Optimum centrifugal (continuous cylinder

type) speed was 4000 rpm for recovery of soluble proteins and 2000 rpm for recovery of precipitated proteins. Addition of pH control agents (citric acid, sodium phosphate or calcium oxide) decreased the breaking force and deformation of the recovered protein gel. The breaking force and deformation of the recovered proteins were high compared with those of conventional surimi. Breaking force and deformation were decreased by addition of NaCl, starch and bovine plasma proteins. Whiteness of the recovered protein gel was lower than that of conventional surimi. Alkaline processing greatly decreased N content and chemical oxygen demand in waste water. It is concluded that alkaline processing has potential as an industrial process for recovery of proteins from fish.
CC R (Fish and Marine Products)
CT COLOUR; FISH; GELS; MACKEREL; PROCESSING; PROTEINS ANIMAL; RHEOLOGICAL PROPERTIES; ALKALIZATION; CROAKERS; FISH PROTEINS

L6 ANSWER 2 OF 40 FSTA COPYRIGHT 2007 IFIS on STN
AN 2004:P1951 FSTA
TI Improved purification of β-lactoglobulin from acid whey by means of ceramic hydroxyapatite chromatography with sodium fluoride as a displacer.
AU Schlatterer, B.; Baeker, R.; Schlatterer, K.
CS Inst. of Vet. Biochem., Free Univ. of Berlin, 14163 Berlin, Germany. Tel. +49-33203-84627. Fax +49-33203-84638. E-mail b.schlatterer(a)berlin.de
SO Journal of Chromatography B, (2004), 807 (2) 223-228
ISSN: 0378-4347
DT Journal
LA English
AB Separation of β-lactoglobulin from acid whey obtained from the milk of normal (healthy) and mastitic cows is described, using ceramic hydroxyapatite chromatography and a displacement agent (sodium fluoride in phosphate buffer). Purity of a β-lactoglobulin fraction from healthy milk (eluted in 1 peak; fluoride concentration = 0.6 ml/l) was 96%. Traces of lactoferrin, serum albumin and immunoglobulin G were present as contaminants. However, larger amounts of these contaminants were present in mastitic whey; consequently, the proportion of β-lactoglobulin present was lower. Contaminants were removed from normal milk using size exclusion chromatography on Superdex 75 pg; purity of β-lactoglobulin was improved by 96-99% with a yield of 50-55%. Lactoferrin, serum albumin and immunoglobulin were also removed successfully from mastitic milk using size exclusion chromatography.
CC P (Milk and Dairy Products)
CT ALBUMINS; GLOBULINS; LACTOGLOBULINS; SEPARATION; WHEY; Nb -LACTOGLOBULIN; ACID WHEY; BOVINE SERUM ALBUMIN; IMMUNOGLOBULIN G; LACTOFERRIN

L6 ANSWER 3 OF 40 FSTA COPYRIGHT 2007 IFIS on STN
AN 2003:P1784 FSTA
TI Extraction of immunoglobulin-G from colostral whey by reverse micelles.
AU Chia-Kai Su; Been Huang Chiang
CS Correspondence (Reprint) address, Been Huang Chiang, Inst. of Food Sci. & Tech., Nat. Taiwan Univ., Taipei, Taiwan. E-mail bhchiang(a)ntu.edu.tw
SO Journal of Dairy Science, (2003), 86 (5) 1639-1645, 43 ref.
ISSN: 0022-0302
DT Journal
LA English
AB Separation of immunoglobulin G (IgG) from the other colostral whey proteins by reversed micellar extraction is reported. Colostral whey was diluted to 5x its original volume with 50mM phosphate buffer at pH 6.35 containing 100mM NaCl. The aqueous solution was then mixed with an equal volume of isooctane containing 50mM bis-(2-ethyl-hexyl) sodium sulfosuccinate (AOT), and shaken at 200 ppm and 25°C for 10 min. After extraction, the mixture was separated into the aqueous

phase and the reversed micellar phase by centrifugation. This procedure extracted most of the non-IgG proteins to the reversed micellar phase and recovered >90% of the IgG in the aqueous phase. The IgG in the aqueous phase had a purity of 90%, and still possessed immunological activity. AOT was not detectable in the aqueous phase. It is concluded that reversed micellar extraction shows good potential as a method for separating and purifying IgG from other proteins in colostral whey.
CC P (Milk and Dairy Products)
CT COLOSTRUM; EXTRACTION; GLOBULINS; SEPARATION; WHEY; IMMUNOGLOBULIN G

L6 ANSWER 4 OF 40 FSTA COPYRIGHT 2007 IFIS on STN
AN 2000(10):R0762 FSTA
TI The affect of bicarbonate salt addition on the gel forming properties of Alaska pollock (Theragra chalcogramma) and pacific whiting (Merluccius productus) surimi.
AU Bledsoe, G. E.; Rasco, B. A.; Pigott, G. M.
CS Northwest Indian Coll., 2552 Kwina Rd., Bellingham, WA 98226, USA
SO Journal of Aquatic Food Product Technology, (2000), 9 (1) 31-45, 36 ref.
ISSN: 1049-8850
DT Journal
LA English
AB Effects of adding sodium and potassium bicarbonates on the gel forming properties, colour and pH of Alaska pollack (Theragra chalcogramma) and Pacific whiting (Merluccius productus) surimi gels were investigated. Bicarbonate salts (0.075-0.125% NaHCO.sub.3, KHCO.sub.3 or 1:1 NaHCO.sub.3:KHCO.sub.3) added to surimi containing 0.3% of a phosphate blend, or added by weight at replacement levels of 25-100% of the phosphate blend, impacted the gel forming properties, colour and pH of Alaska pollack and whiting surimi made under commercial production conditions. Whiting surimi also incorporated 1.5% (w/w) bovine blood plasma. The gel forming properties of either pollack or whiting surimi gels were enhanced only when specific substitution levels of bicarbonate salts were used. Gel forming properties of pollack surimi were increased with addition of 0.100-0.125% NaHCO.sub.3; this effect was not observed with whiting surimi using this treatment. Adding a 1:1 (w/w) mixture of NaHCO.sub.3:KHCO.sub.3 to whiting surimi produced a gel with higher mean deformtion and gel strength than obained with other treatments. At certain concentration, particularly for gels containing KHCO.sub.3, weaker gels were formed by addition of bicarbonate salts. It is concluded that enhanced gel forming effects are dependent upon the cation, concentration and phosphate level; effects are also dependent on fish species used for surimi.
CC R (Fish and Marine Products)
CT ALASKA POLLACK; FISH; GELATION; GELS; SALTS; SURIMI; BICARBONATES; GELATINIZATION; PACIFIC WHITING

L6 ANSWER 5 OF 40 FSTA COPYRIGHT 2007 IFIS on STN
AN 1996(03):Q0012 FSTA
TI High performance liquid chromatography analysis of egg yolk immunoglobulins.
AU Charter, E. A.; Fichtali, J.; Lo, K. V.
CS Innovatech Labs, Div. of Vanderpol's Eggs Ltd., 31212 Peardonville Rd., Abbotsford, BC V2T 6K8, Canada
SO International Journal of Bio-Chromatography, (1995), 1 (3) 199-208, 25 ref.
ISSN: 1068-0659
DT Journal
LA English
AB Mol. weight and purity of immunoglobulin (IgY) from industrially separated egg yolk was determined by HPLC. A 30 cm TSK-G4000SW gel filtration HPLC column was used with 0.1M phosphate buffer (pH 5.4 with 0.05% sodium azide as preservative). The column was connected to a Hewlett Packard HPLC system with ChemStation. Using this

system, mol. weight of IgY was approx. 156 kDa which differed significantly from the value obtained by electrophoresis (175 kDa). This discrepancy is discussed. Purity of samples containing IgY determined using HPLC compared favourably with results obtained using a radial immunodiffusion/total protein technique. It is concluded that the HPLC method is convenient, reliable and rapid for determination of IgY concentration or purity in partially or highly pure samples; this method could be used for monitoring IgY separation from egg yolk.
CC Q (Eggs and Egg Products)
CT ANALYTICAL TECHNIQUES; EGG YOLKS; GLOBULINS; HIGH PERFORMANCE LIQUID CHROMATOGRAPHY; PROTEINS; HPLC; IMMUNOGLOBULINS

L6 ANSWER 6 OF 40 FSTA COPYRIGHT 2007 IFIS on STN
AN 1994(07):S0083 FSTA
TI Yield, chemical and technological characteristics depending on the type and concentration of blood stabilization solution.
AU Bojovic, P.; Radovanovic, R.; Bastic, L.; Perunovic, M.; Barac, M.
CS Poljoprivredni Fak., Beograd-Zemun, Yugoslavia
SO Tehnologija Mesa, (1993), 34 (2/3) 67-74, 23 ref.
ISSN: 0494-9846
DT Journal
LA Serbo-Croatian
SL English
AB Studies were conducted to assess effects of blood stabilization solutions on yield and properties of pig blood plasma. 2 stabilizing agents (sodium citrate and the phosphate-based preparation Sofos 6B) were used, as 10, 15 or 20% solutions added at 2-10% of blood volume Effects on yield, protein content, haemoglobin content and gelation properties of the blood plasma were assessed. The relative merits of the various stabilizer treatments studied are considered.
CC S (Meat, Poultry and Game)
CT ADDITIVES; BLOOD; STABILIZERS; SWINE

L6 ANSWER 7 OF 40 FSTA COPYRIGHT 2007 IFIS on STN
AN 1992(01):J0092 FSTA
TI Rapid separation and detection of concanavalin a reacting glycoproteins: application to storage proteins of a legume seed.
AU Duranti, M.; Gorinstein, S.; Cerletti, P.
CS Dep. of Agrifood Molecular Sci. (DISMA), Via Celoria 2, I-20133, Milan, Italy
SO Journal of Food Biochemistry, (1990), 14 (5) 327-330, 9 ref.
ISSN: 0145-8884
DT Journal
LA English
AB A method is described for detecting native glycoproteins in protein mixtures in mg amounts. The procedure is used to identify bound carbohydrate in lupin storage globulins. The storage globulins were extracted at 4°C from a mature dry seed of lupin (Lupinus albus var. Multitalia) and desalted. About 1-2 mg of globulin mixture were submitted to cellulose acetate electrophoreses (CAE) in 50mM sodium phosphate buffer, pH 7.5, at 150 V for 30 min at room temperature The proteins were stained with Coomassie blue using the micro Bradford method [see Analytical Biochemistry (1976) 72 248-254]. Fractionation of the lupin storage proteins by CAE showed conglutin γ (M.sub.r 200 000), a vicilin-like protein (conglutin β) and a legumin-like protein (conglutin α). The separated proteins were blotted onto a nitrocellulose membrane and were immunodetected by reaction with specific antibodies purified by immunoaffinity chromatography. Since carbohydrate co-valently linked to the protein cannot be assayed directly on immunodetected proteins because of the carbohydrate bound to the immunoglobulins, the sugar assay was applied to samples run on parallel lanes. Results indicate that the procedure outlined can be used

for the separation and assay of glucosylated proteins in their natural state, using commonly available laboratory equipment as easy procedures. Results also show that legumin-like proteins, i.e. conglutin α, are glycosylated in lupin seed and differ in this respect from most legumins.
CC J (Fruits, Vegetables and Nuts)
CT GLYCOPROTEINS; LEGUMES; LUPINS; PROTEINS; PROTEINS VEGETABLE; STORAGE; VEGETABLES

L6 ANSWER 8 OF 40 FSTA COPYRIGHT 2007 IFIS on STN
AN 1992(01):A0016 FSTA
TI Malonaldehyde determination in tissues and biological fluids by ion-pairing high-performance liquid chromatography.
AU Behrens, W. A.; Madere, R.
CS Bureau of Nutr. Sci., Health Protection Branch, Health & Welfare Canada, Tunney's Pasture, Ottawa, Ont. K1A 0L2, Canada
SO Lipids, (1991), 26 (3) 232-236, 42 ref.
ISSN: 0024-4201
DT Journal
LA English
AB [Malonaldehyde (MA) is a volatile β-scission product formed from peroxidation of certain polyunsaturated fatty acids and is considered as index of peroxidation.] A method for the analysis of MA by ion pairing HPLC is described. The method is direct; no thiobarbiturate chromogen formation is required, and sample preparation is simple. After deproteinization with 50% ethanol and removal of particulate by centrifugation, samples were passed through a small silica amino column to remove contaminants. Diluted samples (20 μl) were injected onto an octadecylsilane column (25 cm x 4.6 mm ID, 5 μm) which is eluted with 30mM sodium phosphate buffer, pH 6.5 containing 30% ethanol and 1mM tetradecyltrimethylammonium bromide. Detection was accomplished by monitoring absorbance at 267 nm. The lower limit for reliable quantification was 5 pmol/injection. The method has been successfully applied to the quantification of MA present in plasma , urine and tissues of rats kept under different dietary conditions as well as after in vivo treatment with CCl.sub.4 and iron-dextran. The method was also applied to the quantification of MA during liver microsomal lipid peroxidation and was compared to the thiobarbituric acid test.
CC A (Food Sciences)
CT ALDEHYDES; ANALYTICAL TECHNIQUES; FATTY ACIDS; HIGH PERFORMANCE LIQUID CHROMATOGRAPHY; OXIDATION; HPLC; PEROXIDATION; POLYUNSATURATED FATTY ACIDS

L6 ANSWER 9 OF 40 FSTA COPYRIGHT 2007 IFIS on STN
AN 1990(10):S0070 FSTA
TI Gelation of porcine plasma by glutathione.
AU Lee, J. Y.; Hirose, M.
CS Res. Inst. for Food Sci., Kyoto Univ., Uji, Kyoto 611, Japan
SO Agricultural and Biological Chemistry, (1989), 53 (10) 2839-2840, 17 ref.
ISSN: 0002-1369
DT Journal
LA English
AB Blood plasma and red cell proteins are under consideration as food ingredients and a potential source of high quality proteins. In the present study porcine plasma, adjusted to pH 8.2 (by the addition of 0.06 volume of 1M sodium phosphate [pH 8] and 0.0043 volume of 1M NaOH) and incubated with glutathione (0.39 volume of 0.25M glutathione [pH 8.2]) at 37°C for 16 h, formed an opaque gel. No gelation occurred in the absence of the thiol. Analysis of proteins in the gel sap (supernatant), gel matrix (precipitate) and whole plasma by SDS-PAGE showed the gel matrix to be mainly composed of serum albumin (mol. weight 68 000 Da). Purified porcine serum albumin was also found to form an opaque gel in the presence of glutathione. It is concluded that serum albumin plays a major role in the thiol-dependent gelation of porcine plasma. The thiol-dependent gelation of

serum albumin may occur via a similar mechanism to that for ovotransferrin (a 2nd transferrin present in blood plasma); the 2 proteins share several molecular properties.
CC S (Meat, Poultry and Game)
CT BLOOD; CATTLE; GELATION; ORGANIC SULPHUR COMPOUNDS; PEPTIDES; PROTEINS; GLUTATHIONE

L6 ANSWER 10 OF 40 FSTA COPYRIGHT 2007 IFIS on STN
AN 1990(06):V0035 FSTA
TI Novel process for lowering the concentration of β-lactoglobulin in cheese whey.
IN Al-Mashiki, S. A.; Nakai, S.
PA Canada, University of British Columbia; University of British Columbia, Vancouver, Canada
SO United States Patent, (1989)
PI US 4849241
PRAI CA @@@@-528135 19870126
DT Patent
LA English
AB Concentration of β-lactoglobulin in whey is reduced, while the immunoglobulins are retained, by treating the whey with a polyphosphate, such as sodium hexametaphosphate, within a pH range of approx. 3.8-4.7.
CC V (Patents)
CT DAIRY PRODUCTS; LACTOGLOBULINS; PATENTS; PHOSPHATES; PROTEINS; REDUCTION; WHEY; Nb -LACTOGLOBULIN

L6 ANSWER 11 OF 40 FSTA COPYRIGHT 2007 IFIS on STN
AN 1990(06):S0025 FSTA
TI Liquid chromatographic determination of desfuroylceftiofur metabolite of ceftiofur as residue in cattle plasma.
AU Jaglan, P. S.; Cox, B. L.; Arnold, T. S.; Kubicek, M. F.; Stuart, D. J.; Gilbertson, T. J.
CS Upjohn Co., Agric. Div., Kalamazoo, MI 49001, USA
SO Journal of the Association of Official Analytical Chemists, (1990), 73 (1) 26-30, 13 ref.
ISSN: 0004-5756
DT Journal
LA English
AB A liquid chromatographic (LC) method was developed for determination of the desfuroylceftiofur metabolite of [antibiotic] ceftiofur as a residue in the plasma of animals. Plasma sample in 0.1M pH 8.7 phosphate buffer containing dithioerythritol is incubated under nitrogen for 15 min at 50°C. The sample is centrifuged, charged to a C18 cartridge, and washed with 0.1M ammonium acetate. The desfuroylceftiofur residue on the cartridge is derivatized by adding 0.1M ammonium acetate containing iodoacetamide and letting the cartridge stand in the dark for 30 min. The cartridge is then drained and rinsed, and the desfuroylceftiofur acetamide is eluted with methanol. The mixture is evaporated to dryness, dissolved in pH 10.6 sodium hydroxide, and charged to a SAX cartridge. The derivative is eluted with 2% acetic acid, reduced in volume, and dissolved in LC mobile phase. The LC system includes a C8 column and guard cartridge with UV detection at 254 nm. The gradient mobile phase (flow rate 1 ml/min) is 0.01M pH 5 ammonium acetate programmed to 29% methanol-water (60 + 40) in 25 min. Recoveries were 90-100% with a sensitivity of 0.1 p.p.m. or less. The procedure was applied to the plasma of cattle, rats, horses, pigs and dogs.
CC S (Meat, Poultry and Game)
CT ANALYTICAL TECHNIQUES; ANIMALS; ANTIBIOTICS; BLOOD; CHROMATOGRAPHY; DRUGS; FOOD SAFETY; RESIDUES

L6 ANSWER 12 OF 40 FSTA COPYRIGHT 2007 IFIS on STN
AN 1990(05):S0058 FSTA
TI Characteristics of bovine plasma gels as affected by pH,

sodium chloride, and sodium tripolyphosphate.
AU Knipe, C. L.; Frye, C. B.
CS Meat Export Res. Cent., Dep. of Anim. Sci., Iowa State Univ. Ames, IA 50011, USA
SO Journal of Food Science, (1990), 55 (1) 252-253, 9 ref.
ISSN: 0022-1147
DT Journal
LA English
AB A model system, which simulated the pH, sodium chloride, and alkaline phosphate (STP) levels of typical processed meat products, was used to determine the effect of NaCl, STP and pH on firmness and % cooked yield of bovine plasma gels. Bovine plasma gel firmness increased with increasing plasma pH, whereas % cooked yield was not affected. In contrast, when pH of the plasma solutions was adjusted to a constant 5.6 to simulate the pH and buffering of meat, % cooked yield was affected; gel firmness was not affected. With increased levels of NaCl and STP, % cooked plasma gel yield increased.
CC S (Meat, Poultry and Game)
CT BLOOD; CATTLE; GELS; MEAT; MEAT PRODUCTS; PH; PHOSPHATES; SALT; NACL; TRIPOLYPHOSPHATES

L6 ANSWER 13 OF 40 FSTA COPYRIGHT 2007 IFIS on STN
AN 1990(03):A0017 FSTA
TI Determination of vitamin B.sub.6 derivatives in foods and biological materials by reversed-phase HPLC.
AU Toukairin-Oda, T.; Sakamoto, E.; Hirose, N.; Mori, M.; Itoh, T.; Tsuge, H.
CS Inst. for Food Sci., Fac. of Agric., Gifu Univ., Yanagido, Gifu 501-11, Japan
SO Journal of Nutritional Science and Vitaminology, (1989), 35 (3) 171-180, 29 ref.
ISSN: 0301-4800
DT Journal
LA English
AB 7 vitamin B.sub.6 derivatives, extracted from foods and biological materials with perchloric acid, were determined by HPLC using a single reversed-phase ODS column with a fluorescence detector, and an isocratic solvent system consisting of acetonitrile, sodium perchlorate and potassium phosphate buffer (pH 3.5). Sensitivity for pyridoxal 5'-phosphate was improved by the formation of a more fluorescent derivative, 4-pyridoxic acid 5'-phosphate by treatment with 5mM KCN at pH 7.5. From the data collected on each B.sub.6 derivative, standard equations for the quantification were constructed using the least squares method. Results were compared with those obtained from a bioassay using Saccharomyces uvarum ATCC 9080 after hydrolysis of the raw materials in H.sub.2SO.sub.4 or HCl. Precisions of the HPLC method were excellent; coefficient of variation were <5% and detection limit was 0.05 ng (in the case of pyridoxamine 5'-phosphate) at a signal to noise ratio of 5:1. Vitamin B.sub.6 content of extracts of orange and apple juice, banana, wheat flour, asparagus, rice bran, cream cheese, egg yolk and white, cows' milk, rat plasma and muscle and bakers' yeasts were calculated by interpolation from the respective standard curves based on the integrated peak area. Results generally agreed well with those from the bioassay, especially for cows' milk, wheat flour and egg yolk. The treatment of the raw materials, especially the method of preservation, needs further study.
CC A (Food Sciences)
CT ANALYTICAL TECHNIQUES; HIGH PERFORMANCE LIQUID CHROMATOGRAPHY; VITAMIN B GROUP; FOODS; VITAMIN B6; VITAMINS B

L6 ANSWER 14 OF 40 FSTA COPYRIGHT 2007 IFIS on STN
AN 1988(02):S0052 FSTA
TI [Application of additives for improving the quality of meat products.]
AU Budig, J.; Hojovec, M.

CS Vyzkumny Ustav Masneho Prumyslu, Brno, Czechoslovakia
SO Prumysl Potravin, (1987), 38 (5) 236-237
DT Journal
LA Czech
SL Russian; English
AB Additives for preserving meat colour, and for improving meat consistency and texture were studied. The application of tetrasodium diphosphate, sodium citrate and disodium hydrogen phosphate for correcting the pH are described; the properties of additives for improving water binding capacity of meat are tabulated. A newly developed preparation called 'Lachemeat' is intended for replacement of imported polyphosphates. The most important additives are animal proteins, the best being blood plasma and egg albumin. The properties of some plant additives like soy protein and wheat protein concentrate, untreated and enzymically treated, are described and tabulated.
CC S (Meat, Poultry and Game)
CT ADDITIVES; MEAT PRODUCTS

L6 ANSWER 15 OF 40 FSTA COPYRIGHT 2007 IFIS on STN
AN 1988(01):P0054 FSTA
TI Reduction of beta-lactoglobulin content of cheese whey by polyphosphate precipitation.
AU Al-Mashikh, S. A.; Nakai, S.
CS Dep. of Food Sci., Univ. of British Columbia, Vancouver, British Columbia V6T 2A2, Canada
SO Journal of Food Science, (1987), 52 (5) 1237-1240, 1244, 23 ref.
DT Journal
LA English
AB When Cheddar cheese whey was treated under optimized conditions, i.e. 1.33 mg sodium hexametaphosphate /ml at pH 4.07 and 22°C for 1 h, >80% of β-lactoglobulin was removed by precipitation. In the supernatant, almost all of the immunoglobulins and the major portion of α-lactalbumin were retained, as indicated by SDS gel electrophoresis. Immunochemical assays showed that approx. 90% of immunoglobulin G activity remained in the supernatant. By dialysis against water for 48 h, 72.2% and 45.3% of P was removed from the supernatant and precipitate, resp.
CC P (Milk and Dairy Products)
CT CHEESE; CHEESE VARIETIES; LACTOGLOBULINS; PHOSPHATES; PRECIPITATION; PROTEINS MILK; WHEY; Nb -LACTOGLOBULINS; Nb -LACTOGLOBULINS # CHEDDAR; CHEDDAR CHEESE; CHEDDAR CHEESE WHEY; CHEESE WHEY; CHEESES SPECIFIC; POLYPHOSPHATES

L6 ANSWER 16 OF 40 FSTA COPYRIGHT 2007 IFIS on STN
AN 1987(03):P0043 FSTA
TI Hydrophobic interaction fast protein liquid chromatography of milk proteins.
AU Chaplin, L. C.
CS Dep. Food Structure, Inst. Food Res., Shinfield, Reading RG2 9AT, UK
SO Journal of Chromatography, (1986), 363 (2) 329-335, 17 ref.
DT Journal
LA English
AB Bovine whey proteins and caseins were separated by hydrophobic interaction chromatography with the new Pharmacia fast protein liquid chromatography column, phenyl-Superose. Total casein was separated using a decreasing gradient of 0.8-0.05M sodium phosphate and a constant 3.75M urea concentration, at pH 6.0. Order of elution of caseins was β < γ, α.sub.S.sub.2 < κ < α.sub.S.sub.1; β-casein was always eluted first. Whey proteins were separated with a decreasing salt gradient of 1.5-0M ammonium sulphate in 0.05M sodium phosphate at pH 7.0. Order of elution was β-lactoglobulin < bovine serum albumin < immunoglobulins < α-lactalbumin. The elution order of proteins from the column did not correlate with the calculated average hydrophobicities, but the method was

considered to be a measure of the 'effective' hydrophobicity of proteins and therefore of more use for attempting to relate hydrophobicity to functional properties of proteins. The method shows significant advantages over conventional techniques, allowing rapid optimization of elution conditions and reducing run times from ≥24 h to <2 h.
CC P (Milk and Dairy Products)
CT HIGH PERFORMANCE LIQUID CHROMATOGRAPHY; PROTEINS MILK; HYDROPHOBIC INTERACTION FAST PROTEIN; LIQUID CHROMATOGRAPHY; MILK PROTEINS

L6 ANSWER 17 OF 40 FSTA COPYRIGHT 2007 IFIS on STN
AN 1984(12):T0676 FSTA
TI [Preparation of powdered emulsifying agents for use in the food industry.] Verfahren zur Herstellung pulverfoermiger Emulgatoren fuer die Nahrungsmittelindustrie.
IN Heine, C.; Wuest, R.
PA Henkel KGaA
SO German Federal Republic Patent Application, (1983)
PI DE 3212057 A1
DT Patent
LA German
AB Powdered emulsifying agents are based on edible acid esters of mono- and/or diglycerides of higher, preferably saturated, edible fatty acids (C16-18). The powder is formed by dispersing the glyceride esters together with a carrier substance selected from blood plasma, sodium caseinate, dried skim milk sodium phosphate, potassium phosphate, sodium citrate, potassium citrate and lactose, in water or skimmed milk, homogenizing and spray-drying at air temperature of 150-200° C. The resultant powder has optimum distribution in the desired food composition.
CC T (Additives, Spices and Condiments)
CT DRIED FOODS; EMULSIFIERS; INSTANT FOODS; PATENTS; FOOD EMULSIFIER POWDERS; PATENT; POWDERS

L6 ANSWER 18 OF 40 FSTA COPYRIGHT 2007 IFIS on STN
AN 1984(05):S0895 FSTA
TI Incorporation of bone protein extracts into cooked sausages.
AU Ockerman, H. W.; Caldironi, H. A.; European Meeting of Meat Research Workers [28th Symposium]
CS Ohio State Univ., Columbus, Ohio, USA
SO Proceedings of the European Meeting of Meat Research Workers, (1982), No. 28, Vol. II, 6.04, pp. 336-339, 17 ref.
DT Conference
LA English
SL German; French; Russian; Spanish
AB The possibility of including bone proteins in human food was explored. Bone protein extracts (BPE) were obtained from ground beef bones by an NaOH treatment (final pH approx. 10.0), tumbling (1 h) and storage at 4° C for 24 h. After filtration through cheesecloth, proteins were precipitated from the slurry by adding an HCl (0.5N) solution to obtain a pH of 5.6. A pink, meaty paste was separated when the product was centrifuged at 3000 x g.sub.n for 10 min at 4° C. Emulsifying capacity (EC) values (ml oil/g total protein) were determined and compared to beef muscle protein (BMP) and bovine blood plasma protein (PP) values. EC values for BPE were lower than for the other 2 products, but were considered acceptable. Partial replacement of BPE with BMP resulted in improved EC values. When EC values were expressed as a function of salt soluble protein content, BPE showed similar values to beef muscle proteins. Water holding capacity (WHC) of BPE, BMP and PP showed a close correlation (0.99) with fat/protein ratio when the moisture was similar in all samples. EC and WHC values of bone protein extracts were improved by adding sodium pyrophosphate. An experienced taste panel evaluated cooked sausages (bologna) including combinations of BPE, BMP and PP with and without pyrophosphate. Phosphate addition was undesirable in these sausage emulsions because it produced a

soft texture, probably due to increased WHC. Texture was also very sensitive to changes in the BPE proportions. 20% BPE appeared to be the critical value. Incorporation of 0.4% sodium pyrophosphate to these samples resulted in a product whose texture was significantly softer ($P < 0.01$) than the control. Flavour was objectionable when >20% BPE was incorporated into the emulsions. Phosphate improved the flavour at these levels. Products including ≤10% BPE, ≤10% BPE plus 5% PP, and these combinations plus phosphate, were rated as being acceptable. [See FSTA (1984) 16 5S816.]

CC S (Meat, Poultry and Game)

CT BONES; EXTRACTS; PROTEIN PRODUCTS; SAUSAGES; SENSORY PROPERTIES; BONE PROTEIN # COOKED; ORGANOLEPTIC PROPERTIES

L6 ANSWER 19 OF 40 FSTA COPYRIGHT 2007 IFIS on STN

AN 1982(05):S0968 FSTA

TI Functional and chemical characteristics of bovine plasma proteins isolated as a metaphosphate complex.

AU Etheridge, P. A.; Hickson, D. W.; Young, C. R.; Landmann, W. A.; Dill, C. W.

CS Anim. Sci. Dep., Texas A&M Univ., College Station, Texas 77843, USA

SO Journal of Food Science, (1981), 46 (6) 1782-1784, 1788

DT Journal

LA English

AB A protein isolate was prepared from edible beef plasma by complexing the proteins with sodium hexametaphosphate. The isolate contained 82% protein which was completely soluble within the pH range 5.0-8.0. Foam volume of solutions of the phosphated protein were greater than those observed in egg albumen or in plasma proteins prepared by the ultrafiltration process. Electrophoretic resolution revealed small differences in the protein sp. in phosphated plasma isolates and that prepared by ultrafiltration. Amino acid analyses revealed no major differences between the 2 plasma protein isolates; although there was a reduced tryptophan content in the phosphated protein.

CC S (Meat, Poultry and Game)

CT BLOOD; CATTLE; PROTEIN PRODUCTS; PROTEINS; CATTLE PLASMA PROTEINS ; PLASMA

L6 ANSWER 20 OF 40 FSTA COPYRIGHT 2007 IFIS on STN

AN 1980(07):P1188 FSTA

TI Isolation and utilization of proteins from whey systems of buffalo milk on pilot scale. II. Utilization of whey protein isolates in formulated dairy products.

AU Mathur, B. N.; Srinivasan, M. R.

CS Nat. Dairy Res. Inst., Karnal, Haryana, India

SO Journal of Food Science and Technology, India, (1979), 16 (2) 47-50, 23 ref.

DT Journal

LA English

AB Spray-dried whey protein isolate (WPI) obtained from whey by sodium hexametaphosphate (SHMP) and ferripolyphosphate (FPP) complexing was used at 1 and 2% level in preparing ice cream; WPI obtained by SHMP was used at 12% level in infant feeding dried formulae and WPI obtained by FPP was used at 10% (DM basis) in processed cheese manufacture. Addition of WPI from SHMP and FPP improved the whipping ability and the resistance of ice cream to melt down; addition at 2% was superior to 1%. The formulae had high lactoferrin and immunoglobulin contents resembling human milk, with a protein efficiency ratio of 3.05 and net protein ratio of 4.63. In processed cheese, addition of WPI affected the firmness and elasticity but not the flavour of the product. [See preceding abstract for part I.]

CC P (Milk and Dairy Products)

CT BUFFALOES; CHEESE; CHEESE VARIETIES; DAIRY PRODUCTS; DRIED FOODS; ICE CREAM; INFANT FOODS; PROTEINS; PROTEINS MILK; WHEY; BUFFALO; DRIED; INFANT

FORMULAE; INFANT FORMULAS; PROCESSED CHEESE; PROTEIN ISOLATES

L6 ANSWER 21 OF 40 FSTA COPYRIGHT 2007 IFIS on STN
AN 1979(06):U0358 FSTA
TI [Sweetened condensed whole milk. Technical requirements.]
CS Union of Soviet Socialist Republics Gosudarstvennyi Komitet Standartov
SO Soviet Standard, (1978), GOST 2903-78, 9pp.
DT Standard
LA Russian
AB This standard, replacing GOST 2903-55, specifies that the following substances are to be used in manufacture of sweetened condensed whole milk: cows' milk not exceeding 20° T acidity; cows' milk cream not exceeding 35% fat or 24° T plasma acidity; skim-milk not exceeding 21° T acidity; buttermilk (from sweet-cream buttermaking) not exceeding 20° T acidity; sucrose; and lactose. Ascorbic acid, sorbic acid, dibasic sodium phosphate and trisodium citrate may also be used. Physicochemical requirements include: ≤26.5% moisture; ≥43.5% sucrose; ≥28.5% milk solids; including ≥8.5% fat; viscosity 3-10 poise for 1st 2 months of storage, then ≤15 poise from 2nd to 12th month; size of lactose crystals not to exceed 15 μm. Methods of determining viscosity (falling sphere) and lactose crystal size (ocular micrometer) are described. Requirements are laid down for microbiological quality, packaging, labelling, transport and storage. The product must be stored at 0-10° C and ≤85% RH, not longer than 12 months in a hermetic container or 8 months in a non-hermetic container.
CC U (Standards, Laws and Regulations)
CT MILK; STANDARDS; CONDENSED MILK; REQUIREMENTS # SWEETENED; REQUIREMENTS # SWEETENED CONDENSED; UNION OF SOVIET SOCIALIST REPUBLICS; USSR

L6 ANSWER 22 OF 40 FSTA COPYRIGHT 2007 IFIS on STN
AN 1978(07):S1034 FSTA
TI [Beef-like flavours.]
PA Ajinomoto Co. Ltd.
SO Japanese Patent, (1977)
PI JP 5248186
DT Patent
LA Japanese
AB Beef-like flavours are prepared by reacting plasma protein or egg albumin with ribose or ribose-(5)-sodium phosphate and fructose.
CC S (Meat, Poultry and Game)
CT BEEF; FLAVOURINGS; PATENTS; FOOD FLAVOURINGS; JAPAN; LIKE; PATENT

L6 ANSWER 23 OF 40 FSTA COPYRIGHT 2007 IFIS on STN
AN 1976(09):N0462 FSTA
TI [Storage of new types of margarine products.]
In 'Sovershenstvovanie khraneniya tovarov narodnogo potrebleniya v torgovle.'.
AU Kozin, N. I.; Rebrina, V. V.
CS Moscow, USSR; Vsesoyuznyi Nauchno-issledovatel'skii Institut Ekonomiki Torgovli i Sistem Upravleniya
SO (1974), pp. 65-72
DT Book
LA Russian
AB The following were studied: 4 types of (i) 'Margalakton', a firm, finely dispersed emulsion of 60% fat (40% hydrogenated vegetable fat + 20% butter or sunflower seed oil) and 40% plasma (9-12% dried skim-milk and whole milk, 22-25% whole liquid milk, 5% water, 0.45-0.8% disodium phosphate, 0.15-0.2% sodium citrate, 0.1% cooking salt and 0.05% sorbic acid in 2 of the variants, heated during manufacture to 92°C for 10-15 min); and 2 types of (ii) sweet cream margarine consisting of 82.3% fat base (62.3% hydrogenated vegetable fat (HF) + 20% sunflower seed oil (SO), or 54.4% HF, 15% butter and 10% SO) and 17.7%

plasma (including .5% whole liquid milk, 5.3 or 6.7% water and other additions as for Margalakton), the whole heat-treated at 96°C during manufacture to impart a specific taste and aroma. (i) was stored at 13-15° or at 4°C for ≤25 days, and (ii) was stored at -5° or -15°C for ≤45 days, and peroxide and acid values were determined periodically. The results are tabulated and graphically presented. It is concluded that (i) can be stored in good condition for 20-25 days at 4°C and for 7-10 days at 13-15°C, and that addition of sorbic acid prolonged storage life by 3-5 days. (ii) remained in good condition for ≤45 days. Addition of butter to (i) and (ii) fat bases reduced their storage life and increased oxidative changes.

CC N (Fats, Oils and Margarine)

CT BUTTER; MARGARINES; SHELF LIFE; SORBIC ACID; KEEPING QUALITY; MARGARINE; MARGARINE PRODUCTS; PRODUCTS

L6 ANSWER 24 OF 40 FSTA COPYRIGHT 2007 IFIS on STN

AN 1973(11):P1667 FSTA

TI Recovery of whey proteins with sodium hexametaphosphate

.

AU Hidalgo, J.; Kruseman, J.; Bohren, H. U.

CS Dept. of Res. and Development, Nestle Products Tech. Assistance Co. Ltd., Case Postale 1009, Lausanne, Switzerland

SO Journal of Dairy Science, (1973), 56 (8) 988-993, 20 ref.

DT Journal

LA English

AB Under optimum conditions (pH 3), over 90% of the protein of whey was precipitated by sodium hexametaphosphate, provided the whey was decationized previously. On dry weight basis, the precipitates contained 70-85% protein, 10-20% sodium hexametaphosphate, and 10-15% lactose. Only a negligible amount of the precipitant remained in the supernatant. The protein content of the protein-hexametaphosphate complex was increased to 88-90% by either gel filtration or ion exchange. Ion exchange removed mainly the phosphate whereas gel filtration removed most of the lactose and part of the phosphate. Small amounts of residual sodium hexametaphosphate could be removed from the upgraded complex by neutralizing the solution with calcium hydroxide and centrifuging. The solubility curve of the product showed that the protein would not be denatured by this process. Gel filtration of the complex on Biogel P-10 at pH 8-10 yielded 2 protein fractions and the mineral-lactose fraction. The first fraction contained the immunoglobulins and blood serum albumin whereas the second fraction contained α-lactalbumin and β-lactoglobulin.

CC P (Milk and Dairy Products)

CT PRECIPITATION; SODIUM; WHEY; HEXAMETAPHOSPHATE; MILK (PROTEINS); PROTEIN

L6 ANSWER 25 OF 40 FSTA COPYRIGHT 2007 IFIS on STN

AN 1972(06):U0407 FSTA

TI Condensed phosphates (polyphosphates). Identification in meat products, etc. by paper chromatography.

CS Nordic Committee on Food Analysis

SO Nordic Standard, (1970), 76: 3pp.

DT Standard

LA English

AB The sample is ground with trichloracetic acid or with a 20% solution of trichloracetic acid in the case of dried milk, caseinates, blood plasma, salt mixtures and brines. The extract is filtered and chromatographed on paper (specification given) with trichloracetic acid/isopropanol/ammonium hydroxide solvent. The paper is developed with sodium molybdate/ammonium nitrate/nitric acid, then exposed to steam for 1-2 min. Yellow spots of hydrolysed polyphosphates are sprayed with sodium pyrosulphite/sodium sulphite/monomethyl-p-

amino phenol sulphate to give a blue colour. Orthophosphates originating from the natural phosphate content of meat appear as bluish-grey spots nearest the solvent front.
CC U (Standards, Laws and Regulations)
CT CHROMATOGRAPHY; MEAT; PHOSPHATES; STANDARDS; NORDIC; PAPER CHROMATOGRAPHY; POLYPHOSPHATES; MEAT ; PAPER CHROMATOGRAPHY ; STANDARDS

L6 ANSWER 26 OF 40 FROSTI COPYRIGHT 2007 LFRA on STN
AN 629995 FROSTI
TI E520-3, E541, E554-9, E573: aluminium.
AU Wood R.; Foster L.; Damant A.; Key P.
SO Analytical methods for food additives., Published by: Woodhead Publishing Ltd, Cambridge, 2004, 220-229 (11 ref.)
Wood R.; Foster L.; Damant A.; Key P.
ISBN: 1-85573-722-1
DT Book Article
LA English
AB Permitted food additives containing aluminium are aluminium sulfates, sodium aluminium phosphate and aluminium silicates.
Major food groups contributing the intake of aluminium, maximum permitted levels, and the ADI are listed. Methods for the determination of aluminium in foods are summarized: graphite furnace AAS, flame AAS, electrothermal AAS, inductively coupled plasma atomic emission spectrometry and spectrophotometry. Performance characteristics for the determination of aluminium in milk powder are presented.
SH ANALYSIS
CT AAS; ADDITIVES; ADI; ALUMINIUM; ANALYSIS; ANALYTICAL TECHNIQUES; ATOMIC EMISSION SPECTROSCOPY; DETERMINATION; DIETARY GUIDELINES; FOOD SOURCES; PACKAGING MATERIALS; PACKAGING PRODUCTS; SPECTROSCOPY
DED 12 Feb 2004

L6 ANSWER 27 OF 40 FROSTI COPYRIGHT 2007 LFRA on STN
AN 621207 FROSTI
TI Mode of action of lactocin 705, a two-component bacteriocin from Lactobacillus casei CRL 705.
AU Castellano P.; Raya R.; Vignolo G.
SO International Journal of Food Microbiology, 2003, (August 15), 85 (1-2), 35-43 (31 ref.)
Published by: Elsevier Science. Address: PO Box 211, 1000 AE Amsterdam, The Netherlands. Telephone: +31 (20) 485 3757. Fax: +31 (20) 485 3432. Email: nlinfo-f@elsevier.nl Web: www.elsevier.nl/locate/ijfoodmicro
ISSN: 0168-1605
DT Journal
LA English
SL English
AB Lactocin 705 is a bacteriocin produced by Lactobacillus casei CRL 705. Its activity depends on the action of two peptides, 705alpha and 705beta, each having 33 amino acid residues. The mechanism of action of lactocin 705 was studied with L. plantarum CRL691, which is susceptible to the bacteriocin produced by L. casei CRL 705. Because the main target of lactocin 705 was the plasma membrane, the role and importance of energized membranes in this process were examined. The effects of different ions (magnesium, calcium, sodium, potassium and chloride) on the bactericidal action of lactocin 705 were determined. Energized membranes, obtained by glucose addition, were more susceptible to lactocin 705 action, leading to the release of intracellular potassium ion and inorganic phosphate. Only calcium ion exerted a protective effect against lactocin 705. The bactericidal action of this bacteriocin seems to occur through complementary activity of the two peptides, which form poration complexes in the cytoplasmic membrane, thus dissipating ion gradients and inhibiting the growth of target microorganisms. This was highly stimulated in the presence of glucose and adversely affected by calcium ions.
SH ADDITIVES

CT ANTIBIOTICS; BACTERIA; BACTERICIDAL ACTIVITY; BACTERIOCINS; CYTOPLASMIC MEMBRANES; GLUCOSE; IONS; LACTOBACILLUS; LACTOBACILLUS CASEI; LACTOCIN; MECHANISMS; MICROORGANISMS; PEPTIDES; SUGARS
DED 24 Oct 2003

L6 ANSWER 28 OF 40 FROSTI COPYRIGHT 2007 LFRA on STN
AN 613728 FROSTI
TI Extraction of immunoglobulin-G from colostral whey by reverse micelles.
AU Su C.-K.; Chiang B.H.
SO Journal of Dairy Science, 2003, (May), 86 (5), 1639-1645 (43 ref.)
Published by: American Dairy Science Association. Address: 1111 N. Dunlap Ave., Savoy, IL 61874, USA. Telephone: +1 (217) 356 3182. Fax: +1 217 398 4119. Email: adsa@assochq.org Web: www.adsa.org
ISSN: 0022-0302
DT Journal
LA English
SL English
AB The resistance of breast-fed infants to infection has been attributed to the immunoglobulins in human milk. Bovine colostrum is rich in immunoglobulins, and it has been suggested that the immunoglobulins from cows' milk could be added to infant formula to give similar immunological properties and performance as human milk. Reverse micelles are stable aggregates that form in the organic phase by clustering of polar head groups of a surfactant around an inner core of water. This study investigated the use of reversed micellar extraction for the separation of immunoglobulin G (IgG) from the other colostral whey proteins. Colostral whey was diluted with phosphate buffer containing sodium chloride, and the aqueous solution was mixed with isooctane containing sodium sulfosuccinate, and shaken at 200 rev/min. After extraction, the mixture was separated to the aqueous phase and the reversed micellar phase by centrifugation. The procedure extracted most of the non-IgG proteins to the reversed micellar phase and recovered more than 90% of the IgG in the aqueous phase. The IgG in the aqueous phase had a purity of 90%, and possessed immunological activity. The authors conclude that reversed micellar extraction is feasible for the separation and purification of IgG from the other proteins in the colostral whey, and that the procedure is simple, and reduces the opportunity for the immunoglobulin to be in contact with the organic solvent, thus maintaining its biological activity.
CT COLOSTRUM; DAIRY PRODUCTS; EXTRACTION; IMMUNOGLOBULIN G; IMMUNOGLOBULINS; PROTEINS; PURIFICATION; REVERSED MICELLAR EXTRACTION; SEPARATION; WHEY
DED 11 Jul 2003

L6 ANSWER 29 OF 40 FROSTI COPYRIGHT 2007 LFRA on STN
AN 556074 FROSTI
TI Application of central composite designs for optimization of the chromatographic separation of monomethylarsonate and dimethylarsinate and of selenomethionine and selenite by ion-pair chromatography coupled with plasma mass spectrometric detection.
AU Do B.; Robinet S.; Pradeau D.; Guyon F.
SO Analyst, 2001, (May), 126 (5), 594-601 (33 ref.)
Published by: Royal Society of Chemistry Address: Thomas Graham House, Science Park, Milton Road, Cambridge CB4 0WF, UK Telephone: +44 (1223) 420066 Fax: +44 (1223) 420247 Email: analyst@rsc.org Web: www.rsc.org/analyst
ISSN: 0003-2654
DT Journal
LA English
SL English
AB Selenium is an essential element, but excess intake can be toxic. The toxicity of selenium compounds is dependent on their valence states and

chemical forms. This is similar for arsenic, where it is known that the inorganic forms of arsenic are more toxic. Therefore, speciation of selenium and arsenic can provide a more accurate toxicity-based risk assessment than simply measuring their total contents. Inductively coupled plasma-mass spectrometry (ICP-MS) is a sensitive method for detecting selenium and arsenic and their compounds. However, few existing methods enable their simultaneous determination. A central composite statistical design was used to study the influence of eluent composition, mobile phase additives, and pH value on the ion chromatography separation of arsenic and selenium species (monomethylarsenate, dimethylarsinate, selenite, and selenomethionine) in tap water. By combining these data with another model, which permitted the variation of the chromatographic selectivity of species to be computed from their retention data, arsenic and selenium species were resolved and quantified. The predicted optimum conditions were pH value 5.5-6.5 and a ternary eluent of 2.5 millimolar sodium hydrogenphosphate/ 3-4 millimolar tetrabutylammonium phosphate /acetonitrile; the performance was confirmed experimentally.

SH ANALYSIS

CT ARSENIC; CHROMATOGRAPHY; DETERMINATION; EXTRACTION; FACTORS AFFECTING; ION CHROMATOGRAPHY; MATHEMATICAL MODELS; OPTIMIZATION; SELENIUM; SEPARATION; SIMULTANEOUS DETERMINATION; SPECIATION; STATISTICAL ANALYSIS; TRACE ELEMENTS

DED 21 Jun 2001

L6 ANSWER 30 OF 40 FROSTI COPYRIGHT 2007 LFRA on STN

AN 545743 FROSTI

TI Weight control product comprising a synergistic mixture of guggul extract, phosphate salt and metabolic stimulant.

IN Brink W.D.

PA Natrol Inc.

SO PCT Patent Application

PI WO 2001005356 A2

AI 20000714

PRAI United States 19990720

DT Patent

LA English

SL English

AB A weight-control product comprising a synergistic mixture of guggul extract, phosphate salt and metabolic stimulant is described. The composition reduces body weight and the percentage of body fat in mammals, and plasma lipid levels and cholesterol in overweight hyperlipidaemic people. The phosphate may be the calcium, potassium or sodium salt, and the metabolic stimulant may be ephedrine, synephrine or caffeine, or a mixture of these. The composition may also contain phosphatidylcholine, hydroxycitric acid and L-tyrosine.

SH FUNCTIONAL FOODS

CT BLOOD LIPIDS; CHOLESTEROL LOWERING AGENTS; FUNCTIONAL FOODS; GUGGUL EXTRACT; GUGGUL PRODUCTS; LIPIDS; METABOLIC STIMULANTS; PATENT; PCT PATENT; PHOSPHATES; SLIMMING AIDS; STEROLS

DED 27 Feb 2001

L6 ANSWER 31 OF 40 FROSTI COPYRIGHT 2007 LFRA on STN

AN 404344 FROSTI

TI Quantification of the major bovine whey proteins using capillary zone electrophoresis.

AU Kinghorn N.M.; Paterson G.R.; Otter D.E.

SO Journal of Chromatography, 1996, 723 (2), 371-379 (14 ref.)

DT Journal

LA English

SL English

AB A capillary zone electrophoresis method was used to separate bovine serum albumin and immunoglobulin G from a mixture of commercially

purified whey proteins, and to determine liquid whey proteins in whey samples. Initial separation of individual whey proteins was evaluated using a number of different buffer systems. At buffer pH values greater than 7, protein-capillary wall interactions were minimised. A wide range of buffer additives was added to alter the chemistry of separation and block protein-capillary wall interactions, optimising the resolution of different protein peaks. A sample buffer/separation buffer system enabled the determination of immunoglobulin G. Optimum resolution of major whey proteins was achieved with a low ionic strength phosphate sample buffer and a higher ionic strength sodium borate run buffer.
SH ANALYSIS
CT ALBUMINS; BOVINE SERUM; BOVINE SERUM ALBUMIN; BUFFERS; CAPILLARY; CATTLE; DAIRY PRODUCTS; DETERMINATION; ELECTROPHORESIS; IMMUNOGLOBULINS ; MILK PROTEIN; MILK PROTEINS; PH; PROTEINS; SEPARATION; SERUM; SERUM ALBUMIN; WHEY; WHEY PROTEIN; WHEY PROTEINS; ZONES
DED 19 Mar 1996

L6 ANSWER 32 OF 40 FROSTI COPYRIGHT 2007 LFRA on STN
AN 376925 FROSTI
TI Inorganic constituents (2).
AU American Association of Cereal Chemists.
SO Approved methods, volume 1. (9th edition), Published by: AACC, St. Paul, 1995, Section 40.45-40.75 (17 ref.)
American Association of Cereal Chemists.
ISBN: 0-913250-86-4
NTE REFERENCE ONLY.
DT Book Article
LA English
AB Methods (including colorimetric, gravimetric and volumetric methods) approved by the American Association of Cereal Chemists for the determination of acid-soluble manganese, phosphate in flour improvers, phosphorus in yeast and feed, salt in feed and sulfates in mineral ingredients are presented. Where applicable, apparatus, reagents and procedures for each method are described. Atomic absorption spectrophotometry for the determination of calcium, copper, iron, magnesium, manganese, zinc, sodium and potassium is also considered. The section also includes a method for the determination of minerals by inductively coupled plasma spectroscopy.
SH ANALYSIS
CT AACC; AAS; ANALYTICAL EQUIPMENT; ATOMIC ABSORPTION; CALCIUM; CALCIUM SALTS; COPPER; DETERMINATION; EQUIPMENT; FEEDS; IRON; MAGNESIUM; MANGANESE; MINERALS; PHOSPHATES; PHOSPHORUS; PHOTOMETRY; PLASMA SPECTROSCOPY; POTASSIUM; REAGENTS; RECOMMENDED; SALTS; SODIUM; SPECTROSCOPY; SULFATES; ZINC
DED 6 Jul 1995

L6 ANSWER 33 OF 40 FROSTI COPYRIGHT 2007 LFRA on STN
AN 341249 FROSTI
TI Meat binding by F XIIIa.
AU Nielsen G.S.; Patersen B.R.; Moller A.J.
SO Meat Focus International, 1994, 3 (1), 16-17 (3 ref.)
DT Journal
LA English
AB A blood plasma system, involving the use of the enzyme F XIIIa, has been developed to maintain the quality of restructured meat during refrigerated storage. The effects of F XIIIa at several salt concentrations on texture and tensile parameters of meat in minced meat and meat cube models are investigated. The results indicate that levels of salt and phosphate in restructured meat products could be reduced without texture deterioration if F XIIIa was added.
SH ADDITIVES
CT COHESION; DETERMINATION; ENZYMES; EVALUATION; MEAT; PROCESSING; RECONSTITUTED; REFORMED MEAT; SODIUM CHLORIDE; SODIUM

TRIPOLYPHOSPHATE; TENSILE STRENGTH; TEXTURE
DED 12 May 1994

L6 ANSWER 34 OF 40 FROSTI COPYRIGHT 2007 LFRA on STN
AN 334873 FROSTI
TI Influence of different anticoagulants on yield, chemical composition and functional properties of blood plasma.
AU Radovanovic R.; Bojovic P.; Cavoski D.; Velickovic D.; Barac M.
SO Fleischwirtschaft, 1993, 73 (12), 1420-1424 (18 ref.)
DT Journal
LA German
SL German; English
AB The effects of type, solution concentration and quantity of added coagulant on the yield, chemical composition and functional characteristics of blood plasma were investigated. Sodium citrate and a commercial phosphate preparation were the anticoagulants compared. It was found that the quality factors examined in this study were strongly dependent on the type of additive, the solution concentration and quantity added. In general, addition of sodium citrate resulted in better yield and chemical and functional characteristics than addition of phosphate.
SH PROTEINS
CT ADDITIVES; BLOOD; COAGULATION; INHIBITION; PREVENTION; QUALITY; QUANTITY; REDUCTION
DED 4 Feb 1994

L6 ANSWER 35 OF 40 FROSTI COPYRIGHT 2007 LFRA on STN
AN 303586 FROSTI
TI Bioavailability of calcium.
AU De Vrese M.; Scholz-Ahrens K.; Barth C.A.
SO Cultured dairy products in human nutrition; dietary calcium and health., Published by: IDF, Brussels, 1991, 33-42 (197 ref.)
IDF Bulletin., No. 255
International Dairy Federation.
DT Book Article
LA English
AB Maintenance of plasma calcium levels is essential for a number of body functions. If dietary calcium intakes are low, calcium may be reabsorbed from bone, resulting in osteoporosis. The author suggests that it is not only the total amount of dietary calcium that is important, but also its bioavailability and its dependence on nutritive and non-nutritive factors. This chapter reviews the effect of vitamin D status, infancy, pregnancy, age, menopause, physical activity, disease and therapeutic drugs, the physical form of calcium, lactose and other carbohydrates, fat, dietary fibre, protein, phosphopeptides, phosphate, sodium, magnesium, ascorbic acid, alcohol, caffeine, milk and milk products on the bioavailability of dietary calcium.
SH NUTRITION
CT ABSORPTION; AVAILABILITY; BIOAVAILABILITY; CALCIUM; CONTROL; DIET; FACTORS AFFECTING; HEALTH; REVIEW
DED 5 Feb 1993

L6 ANSWER 36 OF 40 FROSTI COPYRIGHT 2007 LFRA on STN
AN 293538 FROSTI
TI Ingredient and formulation technology for surimi-based products.
AU Lee C.M.; Wu M.C.; Okada M.
SO Surimi technology., Published by: Marcel Dekker, New York, 1992, 273-302 (53 ref.)
Lanier T.C.; Lee C.M.
ISBN: 0-8247-8470-7
DT Book Article
LA English
AB The authors focus on the role of ingredients in modifying the texture of

surimi-based products and their effects on the formation of a gel matrix from myofibrillar proteins of surimi. Potato starch has the greatest effect on gel strength and texture. Non muscle proteins also used include egg white, soya protein isolate, wheat gluten, whey protein concentrate, plasma proteins, and starch-egg albumen mixture. Other fillers of the surimi gel system include hydrocolloids, particularly gums that have gelling ability, carrageenan, alginate, gelatin, methyl cellulose, and powdered cellulose. Their effect on the freeze-thaw stability of surimi gel are considered. Other ingredients examined include sodium ascorbate, vegetable oil, flavourings, seasonings, nucleotides, monosodium glutamate (MSG), hydrolysed vegetable proteins, amino acids, mirin, colorants, emulsifiers, calcium carbonate and phosphate. Formulas for various shellfish analogue products and techniques for developing the optimum formulation are given.

SH PROTEINS

CT COMPOSITION; COMPOUNDS; FISH PRODUCTS; GELATION; GELLING PROPERTIES; GELS; PROPERTIES; RAW MATERIALS; RECIPES; SHELLFISH; STABILITY; SUBSTITUTES; SURIMI

DED 10 Sep 1992

L6 ANSWER 37 OF 40 FROSTI COPYRIGHT 2007 LFRA on STN

AN 287356 FROSTI

TI The effect of sodium zeolite A and cholecalciferol on plasma levels of 1,25-dihydroxycholecaliferol, calcium, and phosphorus in commercial leghorns.

AU Frost T.J.; Roland D.A.; Barnes D.G.; Laurent S.M.

SO Poultry Science, 1992, 71 (5), 886-93 (15 ref.)

DT Journal

LA English

SL English

AB It has been reported that feeding sodium aluminosilicate (sodium zeolite A, (SZA))to laying hens improves eggshell quality. Two possible mechanisms have been suggested for this; the first involves an increase in the utilisation of calcium, and in the second, phosphate ions in the blood may be bound by aluminium ions released from dietary SZA, which results in an increased production of plasma 1,25- dihydroxcholecalciferol (D3) and this vitamin hormone increases both bone resorption and intestinal absorption of calcium for use on the eggshell. Three experiments were carried out to determine a possible mode of action of SZA for improving eggshell quality, which focused on these mechanisms. The authors conclude that the beneficial effect seen in eggshell quality and increased calcium utilisation from feeding SZA is not accomplished through the vitamin D3 system.

SH DAIRY PRODUCTS

CT CHICKEN EGGS; CHICKEN FEEDS; CHICKEN MEAT; CHICKENS; CHOLECALCIFEROL; EGGS; EGGSHELLS; FEEDS; POULTRY; POULTRY EGGS; POULTRY FEEDS; POULTRY MEAT; QUALITY; SHELLS; SODIUM ALUMINOSILICATE; SODIUM ZEOLITE

DED 9 Jun 1992

L6 ANSWER 38 OF 40 FROSTI COPYRIGHT 2007 LFRA on STN

AN 180418 FROSTI

TI Reduction of beta-lactoglobulin content of cheese whey by polyphosphate precipitation.

AU al-Mashikh S.A.; Nakai S.

SO Journal of Food Science, 1987, 52 (5), 1237-40+1244 (23 ref.)

DT Journal

LA English

SL English

AB A new method for eliminating beta-lactoglobulin from Cheddar cheese whey is described. Whey was treated with sodium hexametaphosphate at pH 4.07 and 22 C for 1 hour. More than 80% of beta-lactoglobulin was removed by precipitation. Almost all the

immunoglobulins and the major portion of alpha-lactalbumin were retained. Phosphorus was removed from the supernatant and the precipitate by dialysis against water. A new infant formula containing the beta-lactoglobulin rich supernatant is proposed.

CT ALPHA LACTALBUMIN; APPLICATIONS; BETA LACTOGLOBULIN; CHEDDAR CHEESE; CHEESE WHEY; DIALYSIS; EXTRACTION; FRACTIONS; IMMONOGLOBULIN; IMMUNOGLOBULINS; INFANT FOODS; LACTALBUMIN; LACTOGLOBULIN; PHOSPHATES; PRECIPITATION; QUANTITY; REDUCTION; RETENTION; SODIUM HEXAMETAPHOSPHATE; WHEY

DED 15 Dec 1987

L6 ANSWER 39 OF 40 FROSTI COPYRIGHT 2007 LFRA on STN
AN 138417 FROSTI
TI Beef-like flavours.
PA Ajinomoto Kk.
SO Japanese Patent Application
PI JP 52048166
DT Patent
LA English

CT BEEF FLAVOURING; EGG WHITE; FLAVOURINGS; FRUCTOSE; INTERACTIONS; PLASMA PROTEIN; PLASMA PROTEINS; PRODUCTION; PROTEINS; RIBOSE; RIBOSE SODIUM PHOSPHATE; SUGAR

DED 1 Oct 1980

L6 ANSWER 40 OF 40 FROSTI COPYRIGHT 2007 LFRA on STN
AN 71763 FROSTI
TI Functional and chemical characteristics of bovine plasma proteins isolated as a metaphosphate complex.
AU Etheridge P.A.; Hickson D.W.; Young C.R.; Landmann W.A.; Dill C.W.
SO Journal of Food Science, 1981, 46 (6), 1782-8 (4pp.) (18 ref.)
DT Journal
LA English
SL English

AB Plasma from edible beef blood was complexed with sodium hexametaphosphate. The protein isolate produced was examined for composition, protein solubility, foam volume, electrophoretic pattern and amino acid composition. Comparison was made with proteins prepared by ultrafiltration.

CT AMINO ACIDS; ANALYSIS; BEEF; BLOOD; BLOOD PROTEIN; BLOOD PROTEINS; CHEMICAL PROPERTIES; COMPLEXES; COMPOSITION; DETERMINATION; ELECTROPHORESIS; FILTERED; FOAMING; FOAMING CAPACITY; FUNCTIONAL PROPERTIES; METAPHOSPHATE; PLASMA; PLASMA PROTEIN; PLASMA PROTEINS; PROPERTIES; PROTEIN COMPLEXES; PROTEINS; QUANTITY; SODIUM HEXAMETAPHOSPHATE; SOLUBILITY; ULTRAFILTERED; VOLUME

DED 17 Aug 1982